

Notice of Allowability

Application No.

09/975,974

Examiner

Brian L. Mutschler

Applicant(s)

TAYLOR ET AL.

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 26 November 2003.
2. ☒ The allowed claim(s) is/are 1-26, 30 and 31.
3. ☒ The drawings filed on 15 October 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1 ☒ Notice of References Cited (PTO-892)
- 2 ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3 ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No. _____
- 4 ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

- 5 ☐ Notice of Informal Patent Application (PTO-152)
- 6 ☐ Interview Summary (PTO-413), Paper No. _____
- 7 ☒ Examiner's Amendment/Comment
- 8 ☒ Examiner's Statement of Reasons for Allowance
- 9 ☐ Other

Edna Wong
EDNA WONG
PRIMARY EXAMINER
TC1700

EXAMINER'S AMENDMENT

1. Authorization for this examiner's amendment was given in a telephone interview with Mr. Mark Levy on January 6, 2003.

The application has been amended as follows:

In the claims:

- a*. In claim 1 at line 8, please delete the phrase "at least one additive selected from the group consisting of".
- b. In claim 1 at line 9, please change "plating" to --electroplating--.
- c. In claim 2 at line 1, please change "pulse has" to --pulses have--.
- d. In claim 3 at line 1, please change "pulse has" to --pulses have--.
- e. In claim 4 at line 1, please change "pulse has" to --pulses have--.
- f. In claim 5 at line 1, please change "pulse has" to --pulses have--.
- g. In claim 6 at line 1, please change "pulse has" to --pulses have--.
- h. In claim 7 at line 1, please change "pulse has" to --pulses have--.
- i. In claim 30 at line 1, please change "plating" to --electroplating--.
- j*. Please cancel claims 27-29.

*These changes incorporate the changes submitted by Applicant in the amendment submitted November 26, 2003. The amendment was considered non-compliant because the amendment to claim 1 used the phrase "twice amended", which is not an accepted form. Under the new format, the correct phrase is "currently

amended." All changes indicated in the amendment have been incorporated in this Examiner's Amendment.

2. The following is an examiner's statement of reasons for allowance:

The instant method is distinguished over the prior art of record by providing a method using a modulated reversing electric current in a bath devoid of levelers and brighteners to electroplate metal on the interior surface of a cavity with an aspect ratio greater than about 8:1. While the prior art of record teaches elements of the method, the prior art neither teaches nor suggests the combination of both a modulated reversing electric current and a bath devoid of levelers and brighteners to plate the interior of high aspect ratio cavities. Martin et al. (US 6,071,398) teaches the use of similar pulse trains, but the electroplating bath contains an additive and carrier, which is used for grain refinement (col. 4, lines 7-15), i.e., the additive and carrier function as a brightener. Likewise, Dubin et al. (US 6,491,806) also teach the use of additives with pulsed plating, wherein the additives include polyethylene glycol and sulfur-containing compounds, which acts as levelers and brighteners, respectively. Due to the difficulty in electroplating the interior surfaces of cavities, it would not be readily apparent to one skilled in the art that the interior surface of a cavity may be plated without the use of both brighteners and levelers.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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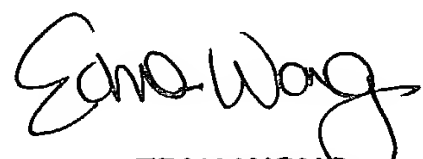
accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian L. Mutschler whose telephone number is (571) 272-1341. The examiner can normally be reached on Monday-Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

blm
December 30, 2003


EDNA WONG
PRIMARY EXAMINER
TC1700